

Mule Deer Winter Range Landscape Level Habitat Survey

1. Draw the outer boundaries of the winter range area on aerial photographs or 1:24,000 topographic maps.
2. In the office, using contour lines and possible vehicle parking spots as a guide, draw a series of foot travel routes across the winter range. The goal is to achieve adequate coverage. Ideally all routes are within about ¼ mile of each other.

Habitat Description

3. Conduct a general field reconnaissance of the area to become familiar with the species of browse plants present, both preferred and less preferred browse species. With big sagebrush it is important to determine which subspecies are present.
4. Systematically walk each of the predetermined routes. While walking the routes record the travel course using a GPS. One can only attempt to walk the route as close as possible to the original plan. Things may vary when in the field.
5. While walking the route, record the dominate shrub species (for big sagebrush determine subspecies). Record the dominant herbaceous species (i.e. Idaho fescue, bluebunch wheatgrass, etc.). Mark GPS location every time the vegetation changes or every ¼ mile along the route. Never go more than ¼ mile without noting the dominant shrub and herbaceous species.
6. While walking the route, use a 3-foot surveillance area on either side of the route for making determinations of vegetation.
7. At each place where data is recorded for dominant shrub species, assess the condition of the browse plants as either ***intensely browsed*** or ***lightly browsed***. If non-dominant browse species are present, note the taxon and assess them as ***intensely*** or ***lightly*** browsed.

8. Once the survey is completed all of the GPS locations can be plotted on a suitable base map (such as All Topo Maps V7, scale 1:24,000) along with the vegetation data. The end result will be a vegetation cover map showing the dominant browse species and corresponding herbaceous dominants, as well as a qualitative assessment of distribution of browsing intensity for both highly preferred and less preferred browse species.

Ungulate Distribution

9. Using a similar protocol to that described above, record the frequency of wild ungulate pellet groups encountered between each observation point (no more than $\frac{1}{4}$ mile between observation points). As with the vegetation assessment utilize a 3 foot area observation distance on either side of the route and make a determination by ungulate species for each pellet group encountered. Rate your observations as low, high, and moderate using the reference guide below:

Pellet Group Use Rating	
High	0-50 ft. occurrence interval between pellet groups
Moderate	50-100 ft. occurrence interval
Low	1 pellet group at a 100 ft. trace occurrence interval
Limited	no pellet groups noted

Figures 1, 2, and 3 illustrate the end product of the survey for ungulate distribution on Fleece WMA (Frisina 1981). Using data from the Habitat Description portion of this survey one can produce similar maps showing general browse use, distribution of shrubs by species, and general vegetation cover map for the area. The approach I am proposing is a modification of an ungulate distribution survey method described by Cole (1975).

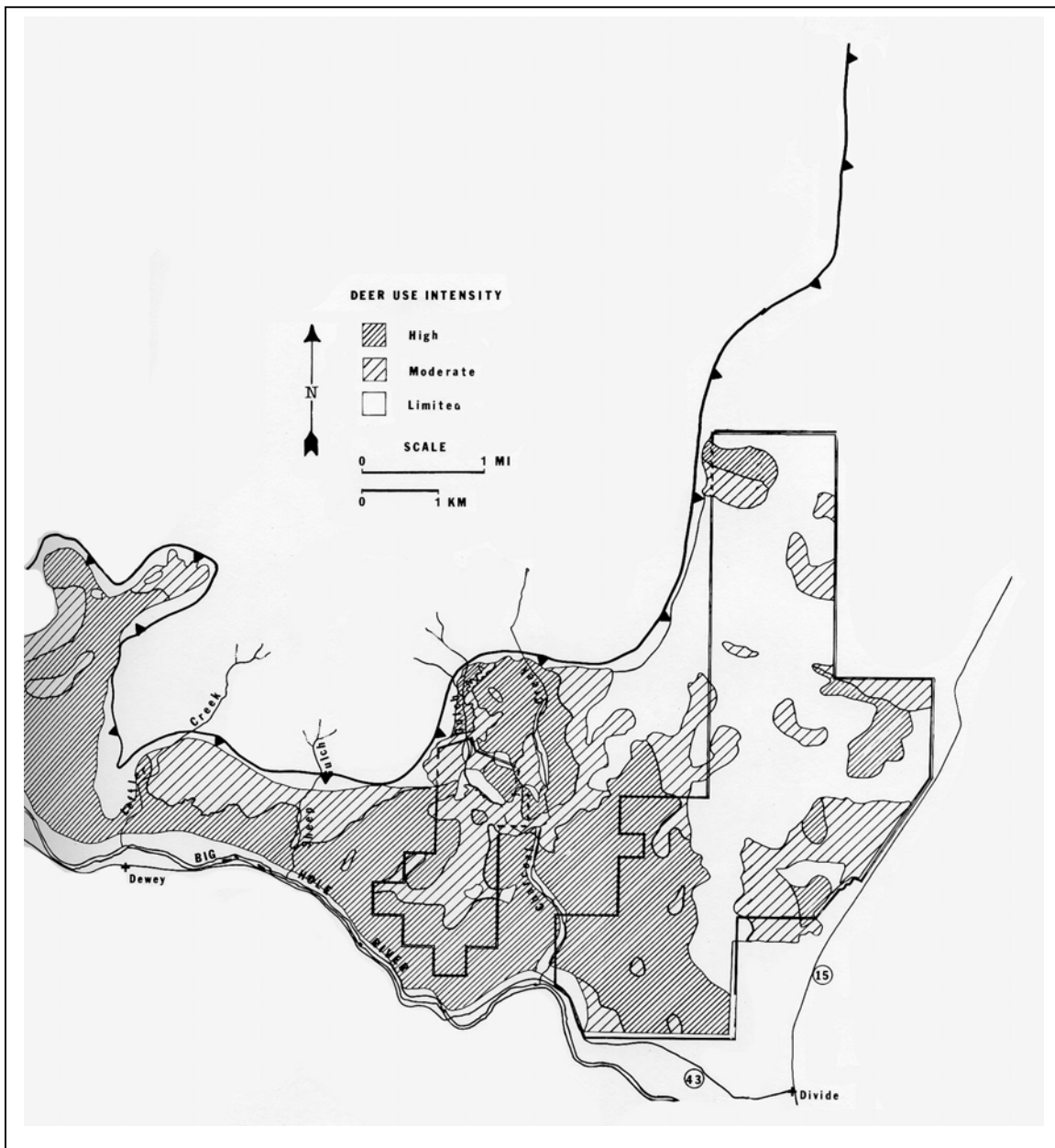
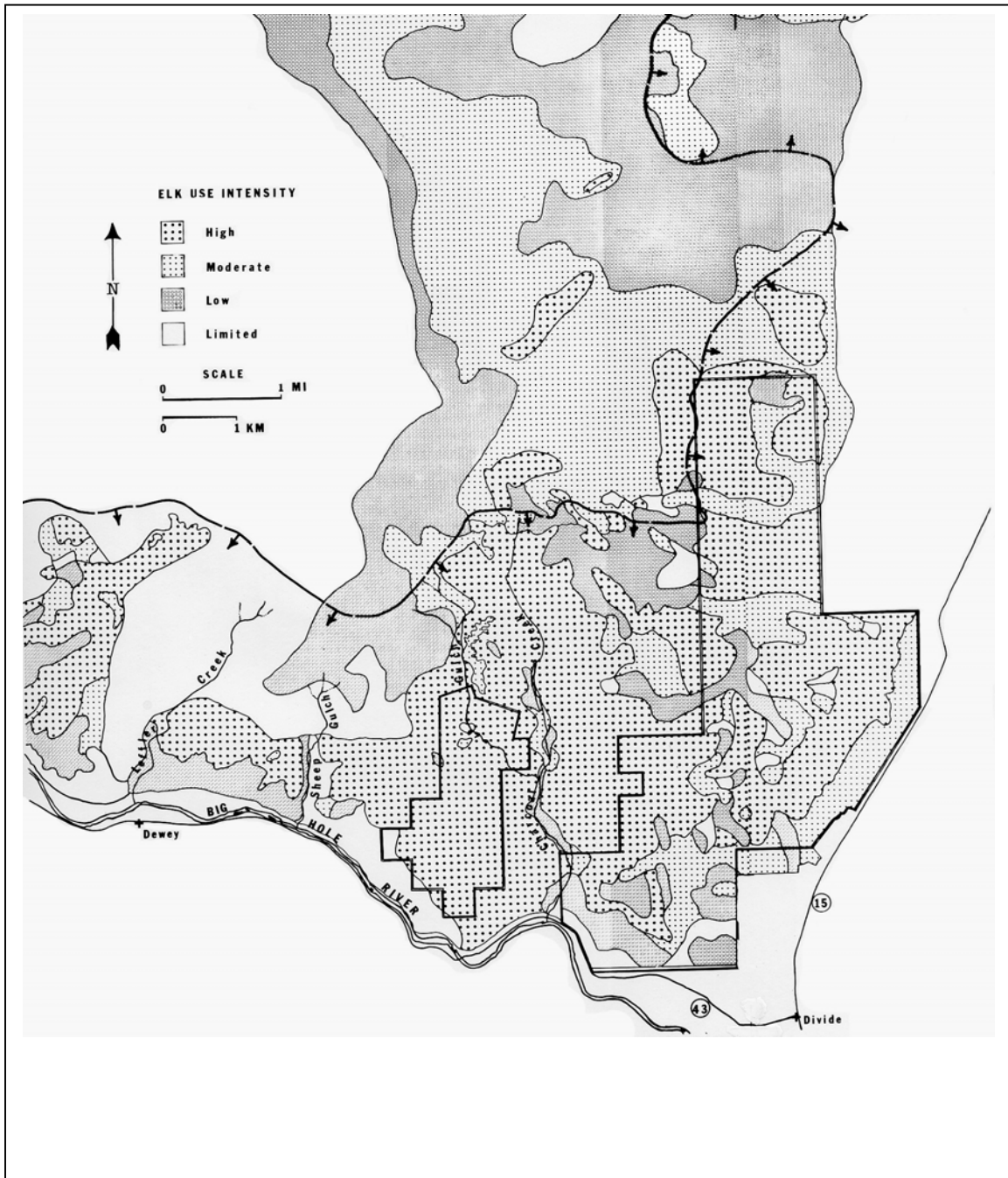


Figure 1. Winter distribution of mule deer on Fleecer WMA based on distribution of pellet groups. As presented in Frisina (1981). Data collected 1979.



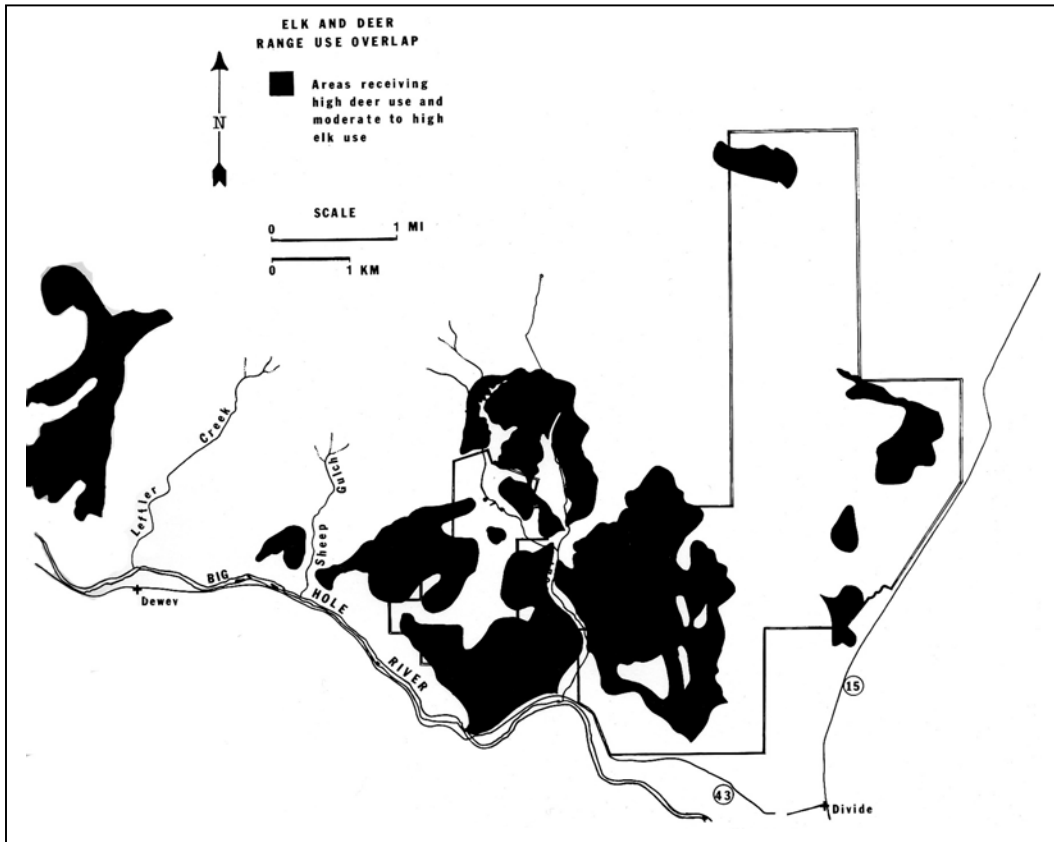


Figure 3. Winter overlap in elk and mule deer distribution on Fleecer WMA based on distribution of pellet groups. As presented in Frisina (1981). Data collected 1979.

Literature Cited

- Cole, N. J. 1975. Wildlife habitat survey method, Deerlodge National Forest, Butte, MT.
- Frisina, M. R. 1981. Big game survey and inventory, Region Three, Mt. Haggin big game study. July 1, 1979 to June 30, 1980. Montana Department of Fish, Wildlife and Parks, Helena. MT.